

The scope of the book is well stated in the preface, where we read that it is "offered as a classroom text for an introductory course in the subject, which shall give a general idea of insects, their structure, life histories and habits, with methods for the control of insect pests in general, followed by a more thorough study of the more important ones found in this country."

Sixty-one pages are devoted to the consideration of the structure and development of insects, to the losses caused by them, to general methods of control both natural and artificial, and to their relationship one to another. In the following 313 pages the twenty-four orders into which the class is divided are considered, and with the exception of the Thysanura and Collembola, a chapter is devoted to each. The structural characters of each of the orders are given, and any particular offender, or group of offenders, against the interests of man, are dealt with in a paragraph labeled "Control." Numerous illustrations, many of which are original, also serve to locate the insect about which information is sought.

The book is recommended as one of the best works on the subject. On the title page we read "first edition," and we think that the coming years will see many more.—WM. T. DAVIS.

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY.

MEETING OF NOVEMBER 1.

A regular meeting of the New York Entomological Society was held at 8 P.M., on November 1, 1921, in the American Museum of Natural History, vice-president Harry B. Weiss in the chair, with 23 members and 5 visitors present.

Mr. Tee-Van spoke of the "Insects about the Tropical Research Station at Kartabo, British Guiana" with lantern slide illustrations and five boxes of specimens of Lepidoptera and other insects. He described the station as conveniently located at the junction of the Mazaruni with the Essequibo river, where the trade winds blowing across the five mile wide stretch of water kept it cool. Within the radius covered by the operations of the station the flat coastal plain, the rolling foothills and the high plateau were all found and each yielded different insects. The station which was established by Wm. Beebe in 1916 has been repeatedly visited by Mr. Tee Van since that time with many interesting experiences. *Peripatus* and its young, shown in one of his pictures, was comparatively common; *Morphos* attracted by pieces of blue paper, groups of Anthomyids sleeping together, 200 Pierids on a space of mud two feet square, were other interesting observations. As instances of the extraordinary richness of the fauna, Mr. Tee Van mentioned 451 species of birds found within two square miles, 93 species of ants on one tree, 800 species of Lepidoptera already recorded. The

remarkable migrations of butterflies was another topic on which he dwelt, the vast number involved on one occasion resembling a snow storm of yellow flakes crossing the river. The great buprestid beetle *Euchroma gigantea* was another common sight about the station; the great SpheX wasp found nesting in a tree by Prof. Wheeler, one of the interesting discoveries in life habits; the hand rails and bridges built by army ants, one of the remarkable features of the insect life.

Mr. Tee Van was followed with close attention and his remarks were discussed by many of the members at the close of his lecture.

Mr. Woodruff exhibited a green roach (*Panchlora cubensis*) introduced from Cuba with bananas. Dr. Bequaert showed a female specimen of the fossorial wasp *Iodium*, taken by him at Plummer's Island, near Washington, D.C., and passed in review the habits of the fossorial wasps of the sub-family Spheginae.

Mr. Wm. T. Davis referred to the fly *Cuterebra buccata* from Staten Island, shown by him at the meeting of October 4, and stated that recently he had been presented with a female *Cuterebra cuniculi*, also from Staten Island, and collected by Mr. John W. Angell in the Clove Valley in June, 1921. This specimen was exhibited. He also showed two female *Cuterebra fontinella* collected in August, 1921, in Martha's Vineyard, Mass., by Mr. Frank Morton Jones, of Wilmington, Delaware, who wrote that he had seen a third specimen in a spider's web, and that some years ago he had taken another on the Island, which had been presented to Mr. Cresson of Philadelphia. All were from the wooded portion of the Island, between Vineyard Haven and West Chop.

MEETING OF NOVEMBER 15.

A regular meeting of the New York Entomological Society was held at 8 P.M., on November 15, 1921, in the American Museum of Natural History, President John D. Sherman, Jr., in the chair, with 21 members and seven visitors present.

Dr. Lutz spoke on "Some Papers on the Color Vision of Bees" pointing out a defect in practically all the 5,000 papers cited in Knuth's *Biology of Flower Color*, in that the colors were not measured by their wave length. He gave some interesting figures showing the number of miles traveled by bees in accumulating a pound of honey based on a statement published that to get a pound, 62,000 flowers had to be visited. He then passed to the apparently contradictory results of experiments conducted to show whether or not bees showed a preference for blue flowers. The experiments of Plateau & Rey and of von Friesch and von Hess were especially mentioned, as indicating that relative luminosity, rather than actual color as known by the human eye, might be the controlling factor. Dr. Lutz also spoke of the origin of flower colors, with which the vision of bees and other insects has been theoretically connected as being concerned in the general problem. Dr. Lutz's remarks were freely discussed by many of

those present. Mr. Davis testified that bees are attracted by the artificial flowers prepared by milliners; Mr. Tee Van's evidence that butterflies at Tropical Research Station were attracted by pieces of blue paper was recalled; Mr. Engelhardt maintained that the principal honey producing flowers are light colored, not necessarily blue however. Mr. Davis pointed out the attraction of sap, sugar and poplar glands, which display no color.

Dr. Bequaert spoke at some length on the importance of the shape of the flower with which he believed the insects became acquainted. He gave instances of their display of intelligence in biting holes to get at the honey; and of their efficiency in reaching within flowers of intricate build. He thought that as color is accidental in minerals, so it might also be in flowers.

Messrs. Angell, Sherman, Notman, Barber, Sturtevant, Marchand and Medsger also contributed to the discussion.

MEETING OF DECEMBER 6.

A regular meeting of the New York Entomological Society was held at 8 P.M., on December 6, 1921, in the American Museum of Natural History, vice-president Harry B. Weiss in the chair, with 15 members present.

Mr. Mutchler proposed Dr. E. R. P. Janvrin, 515 Park Ave., for active membership.

On motion, duly seconded and carried, the by-laws were suspended and Dr. Janvrin was immediately elected.

Mr. Notman read a paper on "Coleoptera collected at Westfield, N. Y.," illustrated by the 384 species he found there, of which 22 were described as new, and 2 required the erection of new genera. Westfield is near the shore of Lake Erie and the mouth of Chatauqua Creek. With the aid of topographical survey map Mr. Notman showed the remarkable ravine in which much of his collecting was done, as well as the long littoral line of lake front, where he had also collected. The large number of new species found was, however, the result of close study of minute and obscure forms rather than that of local environment; Mr. Notman considering the general character of the collection much like what would be found in the rest of New York State. Among the most interesting captures were a specimen of *Pelenomus griseus*, possibly the second known, a long series of *Bactridium ephippigerum* found under small fragments of bark still adhering to an almost denuded log, and *Nicagus obscurus*, found on the sandy banks of the creek.

Mr. Notman was complimented on the rare combination his work displayed of skilful collecting, fine mounting and patient study.

Mr. Davis after exhibiting Dr. H. T. Fernald's "Applied Entomology" read a paper "Remarks on the Cicadas of Virginia" illustrated by specimens of the 14 species and 2 varieties found in the State. Among the incidents connected with his studies of these Virginia Cicadas he mentioned the holidays

spent with Col. Wirt Robinson, (to whom the new species shown was dedicated), a parcel of 51 dead or dying individuals found by Colonel Robinson after a cold night and a record resulting from a Cicada coming in through an open train window.

Mr. Weiss showed two cases of insects imbedded in the fungus *Fomes applanatus*, one being a Cicada pupal shell, the other a beetle, *Boletothercus bifurcus*, which was still alive when found.

MEETING OF DECEMBER 20.

A regular meeting of the New York Entomological Society was held at 8 P.M., on December 20, 1921, in the American Museum of Natural History, President John D. Sherman, Jr., in the chair, with 14 members present.

Commendatory letters re JOURNAL were read.

The librarian's report was filed.

The president appointed a nominating committee, Messrs. Notman, Dickerson and Quirsfeld.

A newspaper illustrated item re A. C. Weeks was shown.

Mr. Notman mentioned that a collection of 1200 species of Centoniinae was for sale, of which particulars might be had at United States National Museum.

Mr. Sherman gave some notes from a recent visit to Washington.

Mr. Weiss read a paper which will be published in full on "Benedict Jaeger, an early entomologist in New Jersey" illustrated by examples of his works.

Mr. Nicolay under the title "Beetling in the White Mts." gave an interesting account of his visit to that locality with Frank R. Mason last June, when at the summit high winds and low temperature caused much discomfort. Some of the beetles collected, especially the Cychrini, were shown. The most remarkable catch was *Nomaretus bilobus* of which several specimens were found under loose bark of fallen trees near the tree line.

Mr. Davis called attention to the work of R. E. Snodgrass on "The Seventeenth-year Locust," being Publication 2607 from Smithsonian Report for 1919, pp. 381-409, with five plates.